

# Chapter 19

## Epilogue

**Caroline Koh**

We began this book with an exploration of what characterize twenty-first century learners and why, in order to engage them, there is a need to revisit and review the way we motivate them, lead their learning, and design their curriculum. This chapter pulls together the views of the various authors with the aim of formulating feasible approaches that could scaffold learning in both real and virtual classrooms. What transpires from the chapters is the intricate link between motivation, leadership, and curriculum. Indeed, knowledge of what motivates the Net Generation (Net Gen) is required before educational leaders and policy makers can chart a feasible course of action paving the way for curriculum experts to design appropriate curricula that are relevant and engaging for the twenty-first-century learner.

In Part 1, the general consensus among authors is that although studies have revealed the wide range of educational opportunities offered by digital innovations, there is still plenty of room for improvement in terms of our understanding of what motivates the twenty-first-century learner and how technology and virtual environments can be refined to enable deep and meaningful learning. In terms of understanding the factors that influence the twenty-first-century learner motivation, Dilani Gedera and her co-authors found that motivation to learn online is promoted when there is provision for easy access to well-organized hyperlinked resources, as well as the creation of space and opportunities for synchronous learning and interaction with peers and facilitators. These findings are supported by the research conducted by Ashwini Dutt and Trudi Aspen on the use of WebQuest strategy to scaffold the use of various Web 2.0 tools.

However, in his chapter, Quint Oga-Balwin cautions against the view that technology is the panacea against all educational woes. He argues that though digital environments may provide more choices to learners, the benefits from these innovations can only be reaped if they offer the necessary structure and direction for meaningful learning. He suggests that efforts should be geared toward building learner competencies and self-control, as well as improving the understanding of

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how learners can foster meaningful rather than surface relationships, in a virtual environment.

Cathy Gunn echoes these views when she proposed, in her chapter, that learner engagement and motivation in online learning are enhanced by attracting and focusing learner attention, establishing the relevance of activities to learning goals, confidence building, and the provision of feedback on performance. Collie Conoley and her co-authors reiterate the importance of these points when they advocate, in their chapter, the need for interactive learning environments that allow experiential, engaged learning, interactivity, collaboration, immediacy, and connectivity. They further assert that computer-generated tasks could provide the balance of challenge and skill, clarity of goals, and feedback immediacy to create the flow experience characterized by deep engagement in learning leading to performance achievement. This in turn fosters learners' well-being and positive emotions, which are the necessary ingredients for success. Conoley thus brings to our attention the role of internal factors in influencing learner motivation.

Kah Loong Chue, in his study on the relationship between personality traits, learner motivation, and academic achievement, further corroborates this view. His findings revealed that traits such as conscientiousness, extraversion, and neuroticism were consistent predictors of academic motivation, while academic achievement correlated strongly with agreeableness, conscientiousness, openness. One general conclusion that can be drawn from this section is that deep learning can be promoted by the use of virtual learning environments, particularly when the latter enable self-efficacy, interconnectedness, and autonomy to be leveraged. Although we have gained better understanding and knowledge of what motivates and engages the twenty-first-century learner, the implementation of what experts recommend can only be carried out with the support of educational and technology leaders and those at the forefront of policy and decision making.

In Part 2, the authors provide analyses of the approaches that could be adopted for the effective implementation of technology-infused programs for twenty-first-century learners, notwithstanding the challenges encountered in the process. Irene Ng perceives the introduction of technology as creating opportunities for school leaders, staff, students, and parents to share and develop a common vision and purpose. Of utmost importance is the principal's role, with input from the staff, in the planning and preparation of technology-infused programs, as well as creating a positive learning climate in the context of twenty-first-century teaching and learning. This author also recognizes the need for leaders to build staff capacity and competencies in both information and communications technology (ICT) and non-ICT domains, in addition to the provision of adequate support for the realization of these projects, thus reaffirming what other authors have advocated in Part 1.

In her chapter on twenty-first-century teachers' professional development, Maria Sit concurs on school leaders' influence on teachers' motivation and active participation in skills upgrading, especially in the need to keep abreast with new technologies and ensuing pedagogical changes. This author supports the view that school leaders should build a culture that supports professional learning, and take concrete

steps to engage individual teachers in their own growth, rather than resting on their assumptions of teachers' needs.

In my contribution to this segment, I elaborate on the issues raised by Irene Ng and Maria Sit by reviewing the extant literature on the topic, which further advocates the need for training and development to be extended to the digital natives, to even out the discrepancies in technology competencies. There is a need for leaders to formulate and communicate clear visions on ICT integration, followed by restructuring of institutional organizational processes, funding and resource allocation, ethical concerns, curriculum development, and program evaluation. Finally, Bee Leng Chua highlights in her chapter how these considerations can be translated into practice in the implementation of a problem-based learning approach in an initial teacher education program, thus establishing the link between leadership policies and curriculum making at ground level.

In the third and final segment of this book, the authors share their diverse views on the influence of new technologies and pedagogies in shaping the curriculum for twenty-first-century learners. To begin, Judine Ladbrook and Judith Parr, in Chap. 13, are of the view that schools serve wider socializing functions and that technologies, if integrated effectively into the curriculum, can assist in this respect by providing a virtual system capable of connecting all the various learning and developmental contexts in which the learner operates. They suggest that new pedagogies should be developed alongside new technologies to assist Net Gen learners, who despite being tech-savvy, are less adept at sourcing for and using curriculum-based information.

Ladbrook and Parr's views on the integration of pedagogy and technology are echoed in the following chapter by Alan Ovens and his colleagues. The latter further reiterate the need to engage twenty-first-century learners purposively, a view supported in earlier chapters by authors such as Quint Oga-Baldwin, Cathy Gunn, Collie Conoley, and colleagues. Ovens and his co-authors propose that student engagement could be achieved by establishing a closer link between learning and assessment. This can be attained by using new technologies to make assessment more student-centered, reflective, and proactive.

In the next chapter, Alexander Yeung and his colleagues agree with Ovens et al. on the potential of the new technologies in transforming learning and assessment, but they highlight the challenges encountered, specifically in the area of language learning and assessment. They outline the possible problems that may surface, such as the limitations of technology in capturing specific nuances of the subject being assessed, failure to align the tasks with the learning objectives, and the need to build teacher competency in dealing with new technologies and the ensuing new pedagogies, an issue raised by some of the authors in Part 2. Yeung and his colleagues recommend a flexible, blended approach, with the use of different technological tools for different activities, and the incorporation of some elements of technology use where appropriate, while retaining traditional assessment approaches that technology is currently unable to replace.

A need for flexibility in the adoption of technology in learning is also advocated by John Williams and his colleagues, writing on the use of e-networks in science

learning. The teachers involved in this study faced similar problems as the language teachers mentioned in the previous chapter, namely with regards to the need for changes in their role and their pedagogical approaches and the need to upgrade their knowledge of learning technologies and to reconcile the demands of the new curricula and assessment modes. However, in this instance, the path to successful implementation of new technologies was facilitated by what the author called “sympathetic school leadership,” which in this study provided the necessary support that was recommended by many of the authors in earlier chapters, namely in terms of infrastructure, resources, and staff development.

One recurrent suggestion for effective infusion of new technologies in learning is a greater alignment of pedagogy with new technologies. This entails not only the review of current pedagogical methods, but also the introduction of novel approaches to teaching and learning that are of greater relevance to the needs of the twenty-first-century learners. The final chapters of this book focus on two such directions in curriculum making. John Yeo, in Chap. 17, highlights the need to focus on developing students’ ability to problem-find, so that they are equipped with the strategies and skills to identify and investigate issues that are meaningful to them in the midst of the complexities presented to them in the virtual, hypertext environment they are exposed to. This is an issue raised earlier by Ladbrook and Parr, who recognize the gap between students’ mastery of new technologies and their ability to make effective use of them.

In the final chapter, Susan Sim gives a lighthearted discussion on the benefits of purposeful play in scaffolding and supporting learning in twenty-first-century preschool classrooms. If William Wordsworth is right when he wrote that “the Child is father of the Man”, what takes place in the preschool classrooms is likely to be a reflection of what will take place in post-school arenas. Since young children gain exposure to digital media from a tender age, new technologies can potentially provide an appropriate platform to scaffold purposeful play and preschool learning, thus setting the stage for learning through the journey of life.